

REMARKS

Claims 11-14 and 16-21 are currently pending in the application; Claims 11, 17 and 18 are independent. Applicants have amended Claims 11, 14, 16, 17 and 18 to further clarify the invention. Support for the amendments is found, for example, at Page 4, Line 14 to Page 6, Line 16 of the specification and Figs. 1-2A of the drawings. No new matter has been introduced.

In the final Office Action dated February 18, 2010, the Examiner has rejected Claims 11, 13, 14 and 16-21 under 35 U.S.C. §103(a) as allegedly unpatentable over U.S. Patent Application Publication No. 2004/0096804 to Vogt et al., (hereinafter “Vogt”) in view of U.S. Patent Application Publication No. 2004/0101808 to Porter et al., (hereinafter “Porter”). Applicant respectfully submits that Claims 11, 13, 14 and 16-21 are patentably distinguished over Vogt and Porter, based on at least the following reasons.

Neither Vogt nor Porter, applied individually or collectively as alleged by the Examiner, teach or suggest the combination of features recited in Claims 11, 13, 14 and 16-21.

Independent Claim 11 recites a transfer part for holding a dental implant. The transfer part includes, *inter alia*, a free extension at one end of the transfer part for coupling a rotational tool and a first radial groove adjacent to the free extension for receiving a securing element. The transfer part further includes, *inter alia*, a clamping portion at the other end of the transfer part for the clamping connection of the transfer part to the dental implant, the clamping connection providing the sole connection between the transfer part and the implant. The clamping portion includes, *inter alia*, a force transmission element for securing the clamping connection against rotation, a second radial groove directly adjacent to the force transmission element, and a clamping ring insertable into the second radial groove to engage with the dental implant. The dental implant also includes, *inter alia*, an internal undercut positioned correspondingly to the

second radial groove of the clamping portion of the transfer part and dimensioned suitably to provide together with the second radial groove a receiving means for clampingly receiving the clamp ring.

Independent Claims 17 and 18 both recite at least the above limitations.

Vogt discloses a combination of a dental implant (1), an adapter (3) and a transfer cap (2). The adapter engages the transfer cap, which in turn engages the dental implant. Specifically, as illustrated in Figs. 3A-3C of Vogt, the adapter has a driving section (30) for fitting into the dental implant, a holding section (31) for engaging the transfer tap, and a plug-type extension (33) for fitting into a coupling piece (rotational tool) used in connection with a screw turning instrument.

Vogt further discloses that the extension (33) has an annular groove (331) for receiving a ring (332) and a non-rotationally symmetrical outer contour (330) for form-fit attachment of the coupling piece (*see*, Paragraph [0088], Lines 18-23 of Vogt).

Once the dental implant, the adapter and the transfer cap are assembled, as shown in Fig. 5B of Vogt, the adapter is coupled with the cap through a press fitting or snap connection, and the transfer cap holds the dental implant through the engagement between an elastic lip (26) of the cap and an implant shoulder (11) of the dental implant. In addition, the driving section (30) of the adapter is placed in a cavity (17) of the dental implant, and the extension (33) of the adapter is disposed outside of the dental implant for engaging a rotational tool during the conveyance of the dental implant.

Thus, Vogt only discloses a single groove (331) and a single O-ring (332), which are located adjacent to the free extension (33). This can be clearly seen in Figs 3A-3C of Vogt.

This radial groove and its securing element are not capable of direct attachment to the implant, because the free extension is not capable of fitting within the internal bore of the implant, and hence a securing element situated in the first radial groove cannot be brought into engagement with the implant. In this regard, Vogt does not provide any teaching, suggestion, or reasoning for modifying the Vogt arrangement to insert the free extension and the first radial groove, both intended for connection to a driving instrument, into the implant.

In contrast, the claimed invention contemplates both a free extension at one end of the transfer part for connecting a driving instrument and a clamping portion at the other end of the transfer part for connecting the dental implant. In an effort to expedite prosecution, Applicants have amended the independent claims to further limit the second radial groove by reciting, “a second radial groove directly adjacent to the force transmission element.” Applicants respectfully submit that Vogt fails to teach or suggest both the free extension and the clamping portion, each comprising a respective radial groove for accommodating a ring. Stated differently, it is improper to interpret the extension (33) and its associated groove (331) and ring (332) as both a free extension for connecting a driving instrument and a clamping portion at the other end of the transfer part for connecting the dental implant. Applicants further respectively submit that it is improper to ignore Vogt’s guidance on the constituent elements of the adapter, and doing so is highly suggestive of hindsight reasoning by the Examiner. Such hindsight reasoning is impermissible.

Furthermore, in Vogt, the attachment between the implant and the adapter occurs via the external transfer cap. Vogt describes at Paragraph [0094] thereof:

“When the transfer cap 2 is locked onto the implant 1 and the adapter 3 is inserted to its full depth into this combination, the driving section 30 of the adapter 3 engages in the inner contour 17 in

the implant 1, and the holding section 31 of the adapter 3 is gripped with defined frictional connection by the cylinder portion 200 of the transfer cap 2. ... The frictional connection between the transfer cap 2 and the adapter 3 is dimensioned so that although the adapter 3 inserted in the transfer cap 2 and in the implant 1 does not inadvertently slide out, said adapter 3 can nevertheless be withdrawn with acceptable loading for an inserted implant 1” (*emphasis added*).

Thus, the transfer cap acts as an external connecting element between the adapter and the implant. One of ordinary skill in the art would understand that, collectively, the transfer cap and the adapter are the minimum set required to implement a connection to the dental implant. Stated differently, the alleged clamping portion of Vogt (33) alone cannot retain and transfer the dental implant. In an effort to expedite prosecution of this case, Applicants have amended the independent claims of the application to further recite, “said clamping connection providing the sole connection between the transfer part and the implant”, to highlight the above distinctions and further distinguish the prior art.

Furthermore, in the claimed invention, the connection between the adapter and the implant is provided internally, as opposed to the external connection implemented by the transfer cap in Vogt. In an effort to expedite favorable prosecution of this case, Applicants have amended independent claims of the application to further recite, “the dental implant comprises an internal undercut positioned correspondingly to the second radial groove”, to highlight the above distinctions and further distinguish the prior art.

The Examiner has also alleged that Vogt discloses an undercut (301). However, as Applicants have previously pointed out, the element designated by this numeral does not relate to the implant but to a beveled surface of the adapter (*see* Paragraph [0088] of Vogt). In use, the beveled face is not even located within the implant, but instead is surrounded by the transfer cap

(see Paragraph [0094] of Vogt). Thus, a clamp ring positioned on this beveled face would not engage the dental implant. In this regard, the claimed invention contemplates an internal undercut for receiving a clamp ring adapted to engage both the dental implant and the transfer part.

Vogt discloses that the adapter (3) which is connected to the implant (1) by means of an additional component (transfer cap 2), wherein the clamping connection between the implant and the transfer cap occurs on the exterior of the implant. As emphasized in Paragraph [0011] of Vogt, the adapter is indispensable to provide a secure hold on the implant. Furthermore, the entire disclosure of Vogt teaches that the secure hold can be only achieved through the use of the externally located transfer cap.

Turning to another prior art reference cited by the Examiner, Porter discloses an abutment connected to the implant. It is worth noting that the dental device in Porter is used in a totally different use setting from Vogt. Specifically, the abutment of Porter is intended to remain fixed within the implant during the end use of the implant (i.e., to provide a support onto which the prosthetic tooth is attached, after the dental implant is installed), while the transfer part of Vogt must only remain connected to the implant during storage and insertion of the implant and be readily removable after the insertion.

In addition, Porter discloses the provision of a toroidal spring within the recess of the implant, to provide a feedback function when a complementary recess in the abutment is aligned with the implant recess. The spring indicates when the abutment is correctly seated. Although Porter indicates that this spring provides a negligible retention force, the main retentive force is provided by abutment screw (70), which is connected to the implant via threads (36). Furthermore, the recess and spring are located apically of both first and second anti-rotation

cavities, i.e., the spring is remote from the force transmission element, not directly adjacent to the force transmission element.

Porter fails to disclose connecting the abutment to the implant solely by way of the toroidal spring. Given the significance of ensuring a secure hold between the implant and adapter taught by Vogt and the triviality of the connection between the abutment and the dental implant implemented by the toroidal spring taught in Porter, one of ordinary skill in the art would not glean from Porter that the toroidal ring for providing a feedback can be in any way, functionally or structurally, equivalent or even close to the secure holding provided by the transfer cap (2) of Vogt.

Furthermore, Vogt further teaches that the transfer cap (2) remains attached to the implant for later use as an impression cap, after placement of the implant within the jawbone and the removal of the adapter (3) (*see* Paragraphs [0021] and [0094] “The frictional connection between the transfer cap 2 and the adapter 3 is dimensioned so that although the adapter 3 inserted in the transfer cap 2 and in the implant 1 does not inadvertently slide out, said adapter 3 can nevertheless be withdrawn with acceptable loading for an inserted implant 1”). Therefore, considering the dual functions performed by the transfer cap, one of ordinary skill in the art would not replace the transfer cap of Vogt with the toroidal spring of Porter.

In summary, the alleged teaching of Vogt and Porter, applied individually or in combination, fails to teach or suggest the combination of features recited in Claims 11, 13, 14 and 16-21; and, the alleged combination of Vogt and Porter, clearly deviating from the teaching of Vogt and Porter, is improper.

Accordingly, the rejection of Claims 11, 13, 14 and 16-21 under 35 U.S.C. § 103(a) based on the combination of Vogt and Porter is overcome, and withdrawal thereof is respectfully requested.

The Examiner has rejected Claim 12 under 35 U.S.C. §103(a) as allegedly unpatentable over Vogt and Porter, in view of U.S. Patent No. 5,078,605 to Sutter et al., (hereinafter "Sutter"). The rejection is respectfully traversed for at least the reasons set forth below.

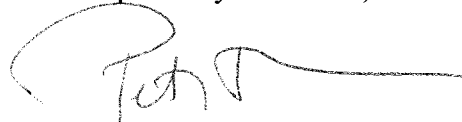
Claim 11, from which Claim 12 depends, is discussed above.

Vogt and Porter are discussed above relative to Claim 11. Sutter is applied to allegedly teach the materials, such as PEEK, for making a clamping ring. Without acquiescing to the propriety of the Examiner's interpretation of Sutter, Applicants respectfully submit that Sutter does not remedy the underlying deficiencies of Vogt and Porter with regard to Claim 11. Thus, taken alone or in any combination, none of Vogt, Porter and Sutter teach or suggest the combination of features recited in Claim 12.

Accordingly, the rejection of Claim 12 under 35 U.S.C. § 103(a) based on the combination of Vogt, Porter and Sutter is overcome, and withdrawal thereof is respectfully requested.

In view of the foregoing amendments and remarks, it is firmly believed that the subject application is in condition for allowance, which action is earnestly solicited.

Respectfully submitted,



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